



Arizona Department of Transportation

INTERMODAL TRANSPORTATION DIVISION Construction Group

CONSTRUCTION BULLETIN 08-02

To:

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District Engineers
Construction Orgs
Consultant Contract Administrator

Date: October 8, 2008**From:** Julio Alvarado, Assistant State
Engineer, Construction**Subject:** Field Red-Line Drawings

Submittal of Red-Lines in an Accurate, Complete, Consistent and Timely Manner

Purpose

- To ensure complete, consistent and timely submission of field red-line drawings;
- To ensure that *all* field red-line drawings performed as part of the contract are received;
- To define the responsibilities and forms required for the red-line submittal process.

Background

There have been instances where past field red-line submittals have been incomplete and incorrect. In addition, upon completion of the construction project, there have been instances where the red-lines have not been compiled and submitted in a timely manner.

Process

As construction progresses, the RE shall record any physical modifications. It is recommended that the field office identify a single drawing set to be used for red-lines prior to the start of construction. Modifications should be recorded promptly to ensure a thorough and accurate set of as-builts can be compiled. (Red-lines can be prepared electronically.)

Within 45 days after project final acceptance, the RE shall assemble the final red-line drawings and transmit them to the designer of record (including Consultant, internal ADOT and Local Government administered projects), accompanied by the revised Field Red-Line Information form and the newly-developed As-Built Preparation Estimate form (both attached). The As-Built Preparation form denotes the number of plan sheets with modifications. A copy of the As-Built Preparation Estimate will also be sent to the ADOT Project Manager for their use.

After all modifications (addendums, change orders, field adjustments, RFIs) are incorporated into the final as-built plans set, the set is returned to the RE (along with the RE's red-line drawings) for a final review. It is the RE's responsibility to confirm that all modifications have been integrated into the final as-built plans. Ensure that any other contract requirements (such as CAP, electrical, etc.) have also been submitted. Upon concurrence, the set is transmitted to the Statewide Project Management Specialist (copy Project Manager the Field Red-Line Information and As-Built Preparation forms only). Concurrence and transmittal must be done within five working days.

A Quantlist has been developed to assist inspectors, project supervisors and office personnel in the task of ensuring that as-builts are complete and accurate for submittal. Upon project completion, the RE shall complete the "Field Red-Line" Quantlist (attached). The Field Red-Line Quantlist is available on the ADOT Quantlist Application.

Attachments

Construction Inspection Quantlist**General Provisions Division 1 Field Red-Lines**

Tracs Number:		Version:	10082008
Reviewer:		SubContractor:	
Author:	Joe Rodriguez	Begin Date:	
Completion Date:		Bid \$ Amount:	
Final \$ Amount:			

Conforming?	Attributes
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	1. All Field Red-Lined changes are recorded onto a hardcopy (Half or Full size.) of the Original As-Bid plans.
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	2. Field Red-Line submittal includes all As-Bid plan sheets and addendums (any sheets replaced or not used are "Xed" out and retained in the Red-Line submittal).
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	3. Field Red-Line information is complete-includes location, (stationing, elevations, offsets etc.), dimensions, and item name.
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	4. Field Red-Lines include all plan's modifications whether by field adjustments, supplemental agreements or RFIs.
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	5. Field Red lines include all utility work (gas, water, CAP, electric, communications, irrigation, railroad, etc.) moved, added or abandoned as part of the construction project.
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	6. Field Red-Lines include only information relevant to the modifications. (Insure inspector's field notes are not included.)
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	7. Field Red-Lines are legible; drawings and text are done neatly and print size is adequate.
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	8. Field Red-Lines have been checked for accuracy prior to submittal to the designer of record.
	Comment:

Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	9. Field Red-Lines ready for submittal is a complete set and are in a correct sequential order.
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	10. The Resident Engineer has completed, signed and dated the Field Red-Lines Information form.
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	11. The Resident Engineer has completed the yellowed portion of the As-Built Preparation Estimate form.
	Comment:
Y <input type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>	12. RE submits Field Red-Lines (and Information and Preparation Estimate submittals) to designer of record (including Consultant, internal ADOT & Local Government administered projects) within 45 days of project final acceptance. (copy only submittals to PM)
	Comments:

Attribute Parity	0
Number of non-conforming attributes	0
Percent Conformance=(Sum yes's/Sum yes's+Sum no's)*100	
Calculate <input type="checkbox"/>	

**“FIELD REDLINES”
CONSTRUCTION ORG. INFORMATION**

PROJECT #: _____ TRACS #: _____

CONTRACTOR: _____

BEGIN DATE: _____

COMPLETION DATE: _____

BID \$ AMOUNT: _____

FINAL \$ AMOUNT: _____

ANY ADD'L ADDENDUM PLAN SHEETS ? Y / N Sht. No.: _____

ANY ADD'L CHANGE ORDER PLAN SHEETS ? Y / N Sht.
No.: _____

NAME OF OFFICE MANAGER: _____

ORG #: _____ MAIL DROP #: _____ TELE. #: _____

(*) RESIDENT ENGINEER'S SIGNATURE:	
DATE:	

ORG. COMMENTS:

(*) SIGNATURE OF THE PERSON WHO OVERSAW THE PREPARATION OF THE AS BUILT PLANS :	
DATE:	

(*) NOTE: The “As Built/Record” Drawing is a compiled representation of the constructed project. The drawing is believed to be correct to the best of the engineer’s knowledge and the accuracy of the information cannot be guaranteed.

INTEROFFICE MAIL:

MAIL DROP 614-E
STATEWIDE PROJECT MANAGEMENT
C/O: STATEWIDE PROJECT MANAGEMENT
SPECIALIST, JOE RODRIGUEZ

MAIL ADDRESS:

A D O T STATEWIDE PROJECT MANAGEMENT
205 S. 17TH AVENUE MAIL DROP: 614-E
PHOENIX, AZ. 85007
C/O: STATEWIDE PROJECT MANAGEMENT
SPECIALIST

Arizona Department of Transportation

As Built Preparation Estimate

Project Number: _____

Resident Engineer's name: _____

TRACS No. _____

Date _____

**Enter your data in all yellow fields
DO NOT CHANGE THESE FIELDS**

			Number of sets	Estimated minutes/sheet	Total estimated minutes	Total Estimated Hours
Number of sheets in plan set	573	sheets				
Number of sheets with no revisions (no redlines) but include checking of seal and signature (1 min/sheet)	431	sheets	1	1.00	431	7
(*) Number of sheets with limited revisions (minor edit redline changes) (15 min/sheet).	112	sheets	1	15.00	1680	28
(*) Number of sheets with extensive revisions (some drawings need to be either created or edited) (40 min/sheet)	30	sheets	1	40.00	1200	20
Number of extra sheets to confirm that all pages are signed (1 min/sheet)	142	sheets	1	1.00	142	2
print half-size sets (1 check, 1 final) (10 sec/sheet)	573	sheets	2	0.17	191	3
print set (1 full size) (30 sec/sheet)	573	sheets	1	0.33	191	3
scan and copy set for CD (2 min/sheet .pdf)	573	sheets	2	2.00	2292	38
Administration (contract estimate, QC etc)						16
Total Project Hours =						118
Equivalent to (min/sheet) =						12

(*) Note: Some major changes may need more time to re-draw some details.

**If that is the situation in your project then add 5 to 10% total hours or
consult with the As Built Statewide Project Management Specialist**